



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,601	12/21/2000	James S. McCormick	1400.4100290	1003
25697	7590	05/06/2004	EXAMINER	
ROSS D. SNYDER & ASSOCIATES, INC. 115 WILD BASIN RD. SUITE 107 AUSTIN, TX 78746			SCHEIBEL, ROBERT C	
			ART UNIT	PAPER NUMBER
			2666	2
DATE MAILED: 05/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/746,601	MCCORMICK ET AL.	
	Examiner Robert C. Scheibel	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 December 2000.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-16 is/are allowed.
 6) Claim(s) 17,19 and 21 is/are rejected.
 7) Claim(s) 18,20,22 and 23 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - the specification does not include brief "Summary of the Invention" section;
please add this section after the section titled "Background of the Invention".

See MPEP § 608.01(d) for more information.
 - in line 2 of paragraph 35 of page 4, "230234" should be "230-234".

Appropriate correction is required.
2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claims 1 and 14 are objected to because of the following informalities:
 - In claim 1, line 6, the phrase "queuing points within the a distributed processor" should be changed to "queuing points within the distributed processor";
 - In claim 14, line 4, "an messaging threshold violation" should be changed to "a messaging threshold violation".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 17, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,253,248 to Dravida et al in view of Applicant's admitted prior art.

Regarding claims 17 and 19, Dravida discloses a communication switch in the node of Figure 27. The nodal processor 2730 discloses the routing control block (claim 17) and central control block (claim 19). The nodal processor performs routing functionality through the maintenance of the routing tables (2750 and 2760) and call

processing through the update of the maintenance of topology information (2801 in Figure 28) and determining alternate paths for calls as the topology changes (lines 65-67 of column 11). The input buffers (2715-2717) and output buffers (2725-2727) of Figure 27 disclose the functionality of the plurality of line cards which are operably coupled with the routing/central control block. As is shown in Figure 27 and the flow chart of Figure 26, when congestion is detected on a transmit queue (output buffer), a congestion indication (via the congestion monitor) is provided to the routing control block. The switch between the congestion monitor 2740 and the routing tables indicates how Dravida routes calls away from the congestion based on this indication.

Dravida does not expressly disclose the limitation that the input and output buffers are line cards. Applicant's admitted prior art (Figure 1) clearly indicates the use of a plurality of line cards in a communications switch. Dravida and Applicant's admitted prior art are from the same field of endeavor of congestion control in a communications node. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Dravida to implement the input and output buffers of Figure 27 on separate line cards. The motivation for doing so would have been to allow the nodes of Dravida to have more capacity (N input/output cards can support more traffic than if all the buffers were implemented on a single card) and allow the system to be upgraded (to higher capacity) more easily. Therefore, it would have been obvious to combine Applicant's admitted prior art with Dravida for the purposes of greater capacity and easier upgradability to obtain the invention as specified in claims 17 and 19.

Regarding claim 21, with the parent claim 19 addressed above, Dravida discloses the limitation of the subsequent routing operations including maintaining the status of a plurality of transmit queues (congestion monitor 2740) wherein the status is used to determine a non-congested compatible transmit queues for the subsequent routing operations (as indicated in lines 42-45 of column 5).

Allowable Subject Matter

7. Claims 1-16 are allowed.

8. The following is an examiner's statement of reasons for allowance:

The prior art of record clearly discloses the limitations of a multiprocessor control block comprising both a plurality of distributed processors and a resource routing control block (see the line setting processors and path management processors of Figure 1 of U.S. Patent 5,657,449 to Osaki for example). The prior art also clearly discloses the limitations of changing the routing based on the detection of congestion in a communications switch (see the rejection under 35 U.S.C. 103(a) above). However, the prior art of record does not disclose or suggest the detection of congestion in a the distributed processors of a multiprocessor switch and sending an indication of this congestion to a centralized resource routing control processor where the congestion based rerouting is performed. Therefore, the invention as specified in claim 1 is allowable. Claims 2-16 depend on claim 1 and are therefore also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. Claims 18, 20, and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,657,449 to Osaki discloses a multiprocessor control block in a communication switch very similar to that of the present application.

U.S. Patent 4,964,119 to Endo et al, U.S. Patent 5,838,677 to Kozaki et al, U.S. Patent 6,201,810 to Masuda et al, U.S. Patent 6,657,962 to Barri et al, U.S. Patent 5,978,359 to Caldara et al, U.S. Patent 5,917,805 to Manning et al, U.S. Patent 6,529,478 to Schwartz et al, and U.S. Patent 6,459,699 to Kimura et al all disclose communication switches with distributed processor architectures and various means for avoiding or managing congestion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 703-305-9062. The examiner can normally be reached on 6:30-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCS 5-2-04

Robert C. Scheibel
Examiner
Art Unit 2666



DANG TON
PRIMARY EXAMINER